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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,898	01/16/2004	Ram Mohan Thakur	KSP-1002US	7009

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EXAMINER

SAMPLE, DAVID R

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,898

Applicant(s)

THAKUR ET AL.

Examiner

David Sample

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 9,14,17,18 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20040503.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 9, 14, 17, 18 and 20 objected to because of the following informalities:

The phrase “ the molecular sieve zeolite obtained are” is not idiomatic English.

Moreover, “selected from” is not a proper Markush group. Appropriate language is “selected from the group consisting of ... and ...,” or “... is ... or”

In claim 14, line 1, “precursor gel” should recite “the precursor gel”.

In claim 17, “selected from group of” is not idiomatic English, and is not a proper Markush group.

In claim 18, line 1, “wherein quantity” should be “wherein the quantity.”

In claim 20, “selected from” is not a proper Markush group.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 12 and 21, the phrase “enhancing the yield of molecular sieve zeolite” is indefinite because the claim provides no basis for determining the scope of what constitutes

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“enhancing.” Must the process “enhance the yield” compared to a process that does not employ intermediate stage aluminum addition? Or, must the process “enhance the yield” when compared to all prior art processes? For the same reasons, claims 13 and 19 are indefinite.

The term "extended period" in claim 2 is a relative term which renders the claim indefinite. The term "extended period" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

The term "dilute" in claim 3 is a relative term which renders the claim indefinite. The term "dilute" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

Claims 6 and 12 are indefinite because the claims provide no context for the “depleted” and “enriched” terms. Is the aluminum depleted compared to the total amount of aluminum necessary for crystallization? Or is the total aluminum depleted when compared to the total aluminum employed in the initial reaction mixture without the intermediate aluminum addition? Similarly, are the soda and silica enriched compared to that which is necessary for crystallization? Or, are the soda and silica enriched when compared to the amount of aluminum?

In claim 7, “the intermediate time period” lacks antecedent basis.

The terms “low,” “medium,” and “high” in claim 8 are relative terms which render the claim indefinite. The terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

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Regarding claims 13 and 17, the phrase "such as" renders the claims indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

In claim 15, "the crystallization time" lacks antecedent basis.

In claim 16, "the crystallization temperature" lacks antecedent basis.

Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

Claims 4-5, 9-11, 14, 18-20 are rejected for failing to correct the deficiencies of the claims from which they depend.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 10, 11, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Araya et al. (US Patent No. 5,772,979).

Araya et al. discloses a method of making a zeolite in which a sodium aluminosilicate is allowed to crystallize for 45 minutes, sodium aluminate is added to the partially crystallized

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reaction mixture, and the resultant mixture was further crystallized. See Examples 1 and 2, col's 4, line 25 to col. 5, lines 10.

As to claim 2, the sodium aluminate is added over a period of 15 or 10 minutes. See col. 4, line 41 and col. 5, line 1.

The recitations of claims 3, 4, 10 and 11 can be found in the reference at col. 4, lines 39 and 66.

As to claim 5, the reference discloses stirring while adding the sodium aluminate in the paragraph bridging col's 4 and 5.

As to claim 7, the reaction mixture is crystallized for 45 minutes prior to adding the sodium aluminate. See col. 4, lines 37 and 65.

Claims 1-11 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuhm et al. (US Patent No. 5,645,811).

Araya et al. discloses a method of making a zeolite in which a sodium aluminosilicate is allowed to crystallize for a time, sodium aluminate is added to the partially crystallized reaction mixture, and the resultant mixture was further crystallized. See Examples 5-8, col's 13-17.

The recitations of claim 2 can be found in the reference at col. 20, lines 10-13.

The recitations of claims 3, 4, 10 and 11 can be found in the reference at, for example, col. 12, lines 53-55.

The recitations of claim 6 can be found in the reference at col. 12, lines 53-68.

As to claim 9, the reference discloses forming NaA which is the Na form of zeolite A. See, e.g., col. 12 lines 53-55.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuhm et al. (US Patent No. 5,645,811) in view of Dwyer et al. (US Patent No. 4,818,509).

As noted above Kuhm et al. discloses a method of making a zeolite in which a silicate solution is mixed with an aluminate solution to form a gel, the gel is crystallized, further sodium aluminate is added during crystallization. The recitations of step (e) regarding depletion and enrichment appear to be present in the reference at col. 4, lines 46-68.

Kuhm et al. differs from the claims in two ways. First, Kuhm et al. fails to disclose the use of seeds in the initial reaction mixture. Second, Kuhm et al. fails to disclose washing the zeolite to a pH of less than 9.

As to the first difference, Dwyer et al. discloses that the addition of seeds to a reaction mixture are known to improve product quality and production rate. See the paragraph bridging col's 6 and 7 of Dwyer et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have mixed seeds with the gel of Kuhm et al. because the resultant process would result in improved product quality and production rate.

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As to the second difference, it was well known to one of ordinary skill in the art, and Dwyer et al. discloses washing the resultant zeolite. See col. 8, lines 35-41 of Dwyer et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have washed the zeolite of Kuhm et al. as suggested by Dwyer et al., and known to one of ordinary skill in the art because the resultant zeolite would be free of reactants.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Sample whose telephone number is (571)272-1376. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (572)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Sample
Primary Examiner
Art Unit 1755